

REMARKS

Claims 1, 17, 21, 25, 30 and 33 are amended. Claims 20, 34 and 35 are cancelled. Claim 29, first instance, and claim 29, second instance, are both cancelled. New claim 36 has been added. New claim 36 corresponds verbatim to cancelled claim 29, second instance. Support for the amendments to the claims can be found at least at Fig. 4 of the Drawings, and at page 4, lines 2-12 of the Specification, as respectively originally filed.

In view of the following amendments and remarks, Applicant respectfully requests that this application be allowed and forwarded on to issuance.

Examiner Interview

Applicant respectfully thanks the Examiner for the time spent discussing the disposition of this case on November 7, 2007, and again on November 14, 2007 with Applicant's representative via telephone. During those respective discussions, Applicant and the Examiner discussed some proposed claim modifications in view of the presently cited art. The Applicant respectfully thanks the Examiner for his general comments in regard to the Application. However, no final agreement was reached during the telephonic interview.

While Applicant believes that the claim modifications submitted herewith are unnecessary, in the spirit of advancing prosecution of this matter, Applicant has made the clarifying amendments listed above and discussed below.

Claim Objections

Claims 29-35 are objected to due to informalities. Specifically, the Office asserts that claim 29 has been numbered twice, therefore all claims after the first

claim numbered 29 have been renumbered (page 2 of Office action).

Both the first and second claims originally numbered 29 have been cancelled as indicated above. The subject matter of the first claim numbered 29 (now cancelled) has been incorporated into the subject matter of claim 25, as amended. The subject matter of the second claim numbered 29 (now cancelled) is recited by new claim 36. Claims 30-33, as originally numbered, are pending in their respectively amended or original forms. Claims 34-35, as originally numbered, are cancelled.

Applicant asserts that the objections to the claims have been fully addressed and respectfully requests that the objections to the claims be withdrawn.

§ 103 Rejections

Claims 1, 16, 25 and 30 (original number) and 33 (original number) stand rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,717,891 ("Negishi") in view of U.S. Patent No. 6,004,243 ("Ewert").

Claims 2-8, 10-13, 26-27, 29 (first instance), 29 (second instance), 31 (original number), 32 (original number), 34 (original number), and 35 (original number) stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Negishi in view of Ewert, in further view of U.S. Patent Application Publication No. 2005/0013365 ("Mukerjee") in still further view of U.S. Patent No. 5,627,765 ("Robotham").

Claims 9 and 28 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Negishi in view of Ewert, Mukerjee and Robotham, in further view of U.S. Patent Application Publication No. 2003/0210251 ("Brown").

1 Claim 14 stands rejected under 35 U.S.C. § 103(a) as being unpatentable
2 over Negishi in view of Ewert, in further view of U.S. Patent Application
3 Publication No. 2004/0268397 ("Dunbar").

4 Claim 15 stands rejected under 35 U.S.C. § 103(a) as being unpatentable
5 over Negishi in view of Ewert and Dunbar, in further view of U.S. Patent No.
6 7,116,743 ("Wang").

7 Claims 17, 19, 23 and 24 stand rejected under 35 U.S.C. § 103(a) as being
8 unpatentable over Negishi in view of U.S. Patent No. 6,130,987 ("Tanaka") in
9 further view of U.S. Patent No. 5,635,982 ("Zhang"), in still further view of U.S.
10 Patent No. 6,219,704 ("Kim") and Mukerjee.

11 Claim 18 stands rejected under 35 U.S.C. § 103(a) as being unpatentable
12 over Negishi in view of Tanaka and Zhang, in further view of Kim and Mukerjee,
13 in still further view of U.S. Patent No. 5,960,006 ("Maturi").

14 Applicant respectfully traverses the rejections above as supported below.

15 The Claims

16
17 **Claim 1** has been amended and, as amended, recites a computer-
18 implemented method for processing video data comprising:

- 19
20
- 21 • determining an ideal playback timing associated with the video data,
22 the ideal playback timing determined at least in part by way of
23 information encoded in the video data; and
 - 24 • if an actual playback timing of the video data lags the ideal playback
25 timing, the lag resulting from a limited processing power of the
computer implementing the method, varying a frame rate associated
with the video data using a smoothing function to recover toward the
ideal playback timing.

1 Negishi fails to teach or suggest that if an actual playback timing of the
2 video data lags the ideal playback timing, the lag resulting from a limited
3 processing power of the computer implementing the method, varying a frame
4 rate associated with the video data using a smoothing function to recover toward
5 the ideal playback timing, as recited by the subject matter of claim 1, as amended.

6 Rather, Negishi is directed to estimating a recorded position for particular
7 content within a media file when the data rate and the playback time are not
8 linearly related (Abstract of Negishi). That is, Negishi is concerned with
9 determining where a particular time point is within a data file when
10 straightforward linear determination cannot be used. Figs. 3A and 3B of Negishi
11 depict the non-linear data-content/point-in-time relationship that Negishi is
12 concerned with.

13 For example, under Negishi, the chronological midpoint of a media
14 recording may not correspond to the midpoint of the media data (i.e., bytes). That
15 is, under Negishi, the chronological 50% point in a video file (e.g., halfway
16 through a movie) may occur at the 60% point in the data file content. In response,
17 Negishi presents a repetitive method of estimating, accessing, and re-estimating to
18 determine where, within an acceptable margin of error, a desired time point is
19 within a data file. Please refer to Fig. 4 of Negishi. It is important to note that
20 Negishi is concerned with finding particular points in time within a data file, *not*
21 playback timing (i.e., rate) of that file as limited by the processing power of a
22 computer.

23 In any case, Negishi is not concerned with: 1) actual playback timing that
24 lags the ideal playback timing; nor 2) any lag resulting from the limited processing
25 power of a computer. In fact, Negishi is completely lacking any of the terms

1 “frame rate”, “delay” or “lag”, or any of their respective equivalents, in any
2 context. In short, Negishi is directed to solving a different problem (locating a
3 point in time within a data file vs. accommodating a lag in actual playback timing)
4 in a different way (a repetitive search algorithm vs. varying a frame rate using a
5 smoothing function) than the subject matter of claim 1, as amended.

6 Ewert fails to cure the deficiencies of Negishi. In particular, Ewert, like
7 Negishi, fails to teach or suggest if an actual playback timing of the video data
8 lags the ideal playback timing, the lag resulting from a limited processing
9 power of the computer implementing the method, varying a frame rate
10 associated with the video data using a smoothing function to recover toward the
11 ideal playback timing, as recited by the subject matter of claim 1, as amended.

12 Rather, Ewert is directed to intentionally varying a video frame rate in
13 correspondence to a wheel speed detector coupled to a bicycle (Abstract of Ewert).
14 Under Ewert, a video presentation rate is intentionally altered (sped up or slowed
15 down) in order to simulate the particular speed at which a user is riding a
16 stationary bicycle. Thus, Ewert is not concerned with playback timing that lags
17 the ideal as a result of limited processing power of a computer. On the contrary,
18 Ewert depends on a system that has all of the required processing power in order
19 to function satisfactorily. Ewert is totally devoid of any of the terms “ideal” or
20 “lag”, or any of their respective equivalents, in any context.

21 There is no way to select elements from Negishi, and then to somehow
22 combine those elements with other elements selected from Ewert, in order to
23 arrive at the subject matter as recited by claim 1 (as amended), as no possible
24 combination of Negishi and Ewert teaches or suggests all of the required features
25 and limitations. At the very least, Negishi and Ewert – alone, or in any

1 permissible combination – fail to teach or suggest: 1) an actual playback timing of
2 the video data lags the ideal playback timing, the lag resulting from a limited
3 processing power of the computer implementing the method; and/or 2) varying a
4 frame rate associated with the video data using a smoothing function to recover
5 toward the ideal playback timing, as recited by claim 1, as amended. Such mutual
6 deficiency on the parts of Negishi and Ewert renders the § 103 rejection of claim,
7 as amended, unsupportable in view of the requirements of MPEP 2143.03.

8 Furthermore, one having ordinary skill in the art would not be motivated to
9 modify either Negishi or Ewert to include the subject matter as recited by claim 1
10 (as amended) as neither Negishi nor Ewert is concerned with addressing the
11 limited processing power of a computer. Both Negishi and Ewert require
12 respective means that are fully capable of performing their respective teachings.
13 Neither Negishi nor Ewert teaches or suggests any alternative method steps in the
14 event that such respective means are inadequate for performing the desired
15 operation(s). Such lack of motivation on the part of the cited references renders
16 the § 103 rejection of claim 1, as amended, unsupportable in view of the
17 requirements of MPEP 2143.01.

18 For at least the foregoing reasons, Applicant asserts that the § 103 rejection
19 of claim 1, as amended, is invalid and must be withdrawn. Applicant further
20 asserts that claim 1, as amended, is allowable.

21 **Claims 2-16** are allowable at least by virtue of their dependence from an
22 allowable base claim.

23 **Claim 17** and its dependents will be discussed in accordance with the
24 indication of allowable subject matter hereinafter.
25

1 **Claim 25** has been amended and, as amended, recites an apparatus
2 comprising:

- 3 • means for determining an ideal playback timing associated with
- 4 video data;
- 5 • means for varying a frame rate associated with the video data using a
- 6 smoothing function to recover toward the ideal playback timing;
- 7 • means for computing a delay by comparing an actual playback
- 8 timing with the ideal playback timing, the actual playback timing
- 9 lagging the ideal playback timing as a result of a limited processing
- 10 capability of the apparatus; and
- 11 • means for incorporating the delay into the smoothing function.

12 Negishi fails to teach or suggest means for computing a delay by comparing
13 an actual playback timing with the ideal playback timing, the actual playback
14 timing lagging the ideal playback timing as a result of a limited processing
15 capability of the apparatus, as recited by claim 25, as amended.

16 Negishi is not concerned with comparing actual playback timing with ideal
17 playback timing, in order to compute a delay, as Negishi is not concerned with the
18 delays in a system. Additionally, Negishi is not concerned with actual playback
19 timing lagging the ideal playback timing as a result of a limited processing
20 capability of an apparatus. Negishi offers no comment or suggestion directed to
21 any apparatus having limited processing capability.

22 Ewert fails to cure the deficiencies of Negishi. In particular, Ewert fails to
23 teach or suggest means for computing a delay by comparing an actual playback
24 timing with the ideal playback timing, the actual playback timing lagging the
25 ideal playback timing as a result of a limited processing capability of the
apparatus, as recited by claim 25, as amended.

Again, Ewert is concerned with the intentional control of frame rates as presented to a user of the corresponding system. Ewert is not concerned with actual playback timing lagging the ideal playback timing as a result of a *limited processing capability* of an apparatus. At any rate, no permissible combination of Negishi and Ewert teaches or suggests all of the features and limitations as recited by the subject matter of claim 25, as amended.

The foregoing reasons alone are sufficient to require that the § 103 rejection of claim 25, as amended, be withdrawn and the claim allowed.

Claims 26-28 are allowable at least by virtue of their dependence from an allowable base claim. While the particular rejections of claims 26-28 have been considered, they are not seen as adding anything of merit.

Claim 30 has been amended and, as amended, recites one or more computer-readable media having stored thereon a computer program that, when executed by one or more processors, causes the one or more processors to:

- determine an ideal playback timing associated with video data; and
- if an actual playback timing of the video data lags the ideal playback timing, vary a frame rate associated with the video data using a smoothing function to recover toward the ideal playback timing, wherein the lag results from an inherently limited processing capability of a system processing the video data.

Neither Negishi nor Ewert teaches or suggests if an actual playback timing of the video data lags the ideal playback timing, vary a frame rate associated with the video data using a smoothing function to recover toward the ideal playback timing, wherein the lag results from an inherently limited processing capability of a system processing the video data, as recited by claim 30, as amended.

Neither Negishi nor Ewert is concerned with an actual playback timing that lags the ideal playback timing as a result of an inherently limited processing capability of a system processing the video data. In any case, no permissible combination of Negishi and Ewert teaches or suggests all of the features and limitations as recited by the subject matter of claim 30, as amended. Further still, there is no motivation to modify or combine Negishi in view of Ewert (or vice versa), as neither Negishi nor Ewert seeks to solve any problem resulting from an inherently limited processing capability.

The foregoing reasons alone are sufficient to require that the § 103 rejection of claim 30, as amended, be withdrawn and the claim allowed.

Claims 31-32 are allowable at least by virtue of their dependence from an allowable base claim.

Claim 33 has been amended and, as amended, recites an electronic device comprising:

- a memory; and
- a processor coupled to the memory, the processor being configured to
 - determine an ideal playback timing associated with video data; and
 - if an actual playback timing of the video data lags the ideal playback timing, vary a frame rate associated with the video data using a smoothing function to recover toward the ideal playback timing, the lag resulting from an inherently limited processing capability of the electronic device, and wherein the processor is further configured to:
 - compute an average delay by averaging delays associated with frames in the video data and incorporate the average delay into the smoothing function; and
 - apply a frame-dropping algorithm that drops frames in the video data in accordance with the smoothing function.

1 Neither Negishi nor Ewert teaches or suggests if an actual playback
2 timing of the video data lags the ideal playback timing, vary a frame rate
3 associated with the video data using a smoothing function to recover toward the
4 ideal playback timing, the lag resulting from an inherently limited processing
5 capability of the electronic device, as recited by claim 33, as amended.

6 For at least reasons analogous to those argued above in regard to claims 1
7 and 30 (as respectively amended), the § 103 rejection of claim 33, as amended, in
8 unsupportable and should be withdrawn.

9 Allowable Subject Matter

10 The Office has indicated that claims 20, 21 and 22 are objected to as
11 depending from a rejected base claim, but would be allowable if rewritten in
12 independent form including all of the limitations of the base claim and any
13 intervening claims and amended to overcome the rejection(s) under 35 U.S.C.
14 § 103 as set forth in the Office action (pages 14-15 of Office action).

15 Claim 17 has been amended to include all of the features and limitations of
16 claim 20 (now cancelled). Thus, claim 17, as amended, is equivalent to claim 20
17 rewritten in independent form and including all of the limitations of the base claim
18 and any intervening claims. As such, claim 17 is now allowable. Claims 18-19
19 and 21-24, as respectively amended, depend directly or indirectly from claim 17
20 and are also allowable at least by virtue of their dependence.
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Conclusion